

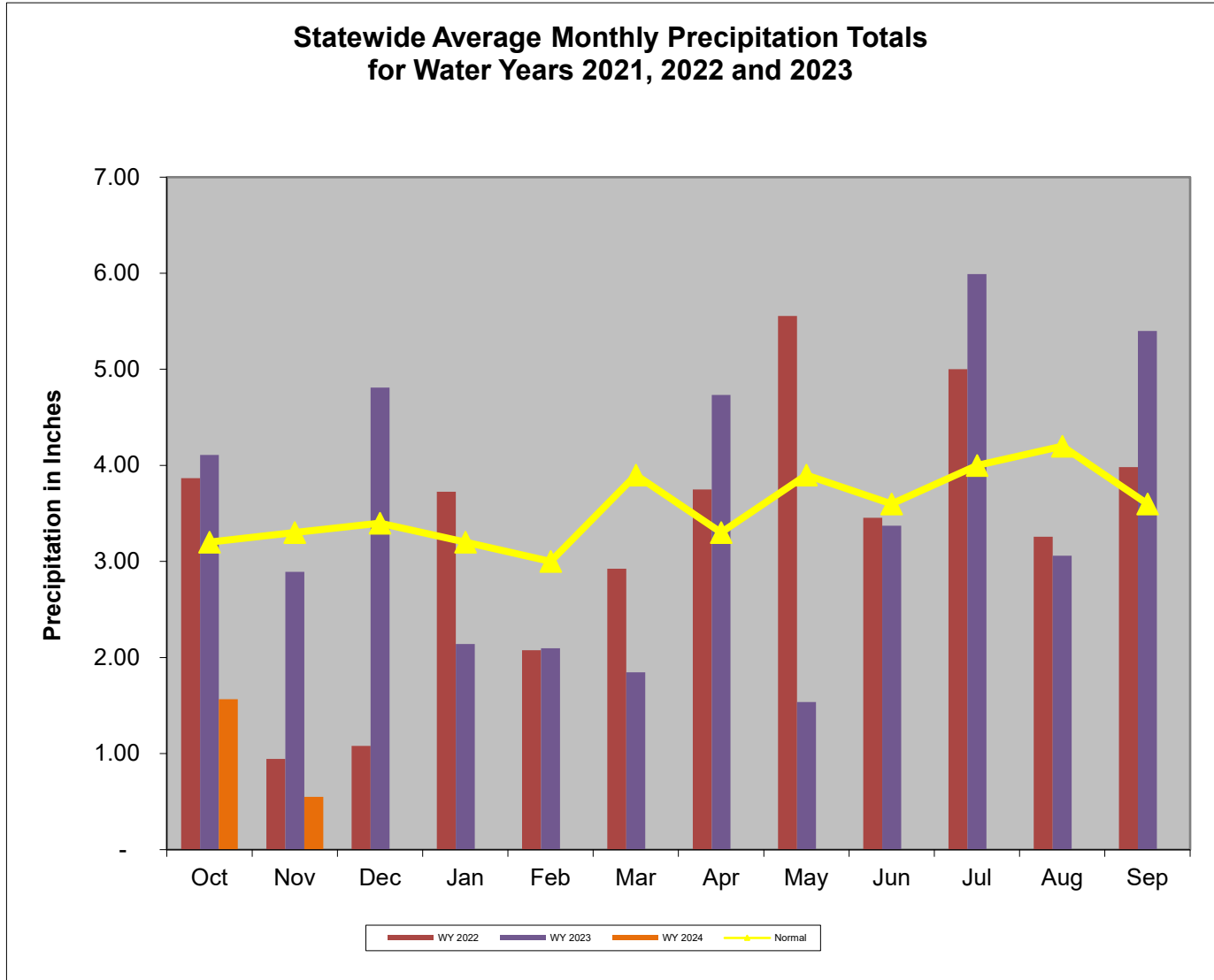
Overall Hydrologic Status for Maryland

| Summary of Hydrologic Indicators for 15-November 2023 | | | | | |
|---|----------|-------------|-------------|------------|----------------|
| | Rainfall | Stream Flow | Groundwater | Reservoirs | Overall Status |
| Western | Normal | Normal | Warning | Normal | Watch |
| Central | Warning | Watch | Warning | Normal | Warning |
| Eastern | Normal | Normal | Normal | | Normal |
| Southern | Watch | | Normal | | Normal |

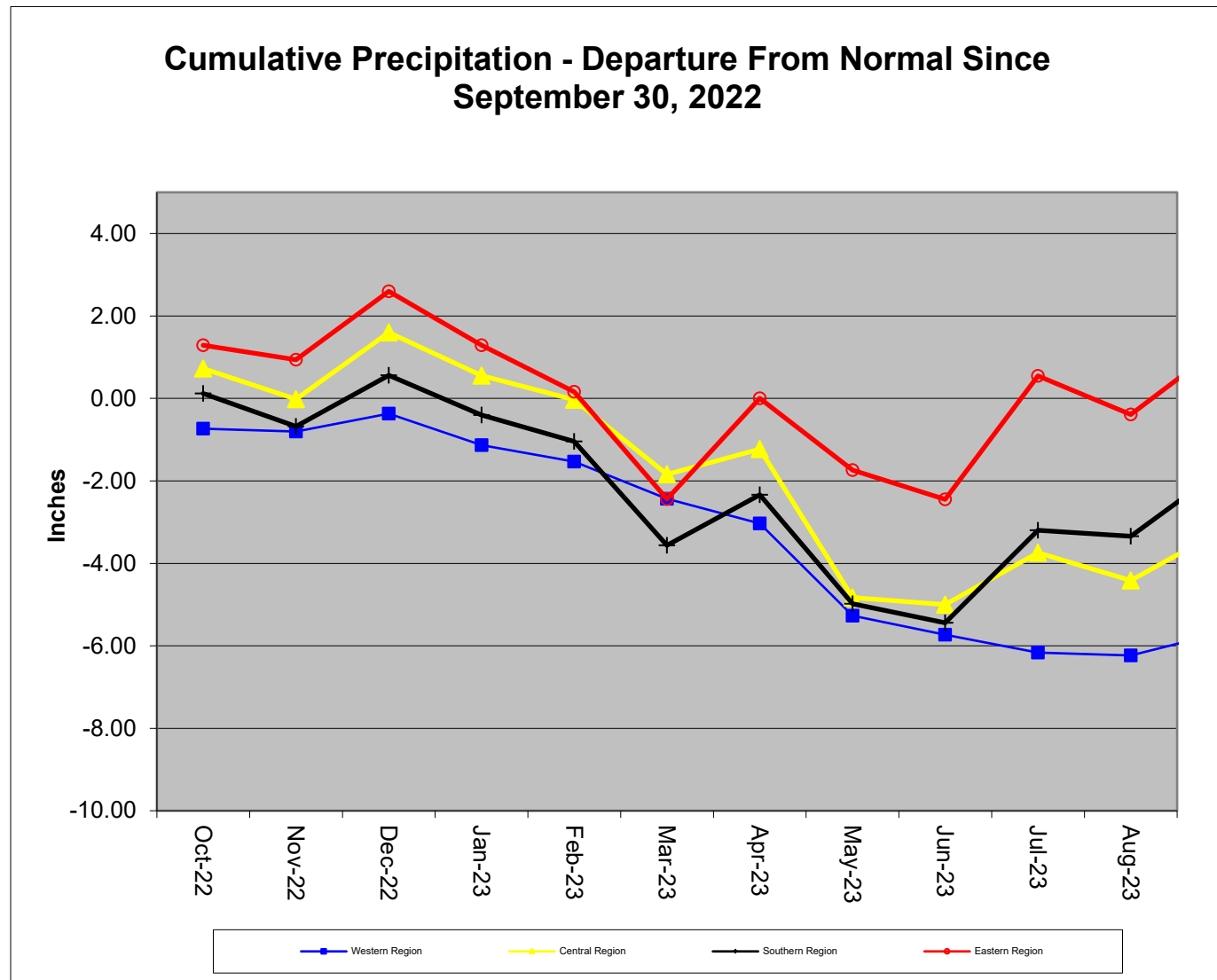
Notes: The WSSC Patuxent reservoirs have less than 120 days of water in storage. This is a result of dredging in the Triadelphia, which is scheduled to end by November 2023.

| Precipitation Indicators for Maryland Drought Regions November 15, 2023 | | | | | | |
|--|-----------------------|-----------|--------------------|-----------|--------------------|-----------|
| | Since August 31, 2023 | | Since May 31, 2022 | | Since Nov 30, 2022 | |
| Regions | Percent of Normal | Condition | Percent of Normal | Condition | Percent of Normal | Condition |
| Western | 75% | Normal | 84% | Normal | 81% | Watch |
| Central | 64% | Warning | 84% | Normal | 81% | Watch |
| Eastern | 73% | Watch | 93% | Normal | 90% | Normal |
| Southern | 68% | Watch | 92% | Normal | 86% | Normal |

WY or Water Year begins on October 1.



Data downloaded from http://www.weather.gov/marfc/Precipitation_Departures



Precipitation in Maryland Counties as of 15 November 2023 (WY 2024)

| | | Normal Rainfall, Actual Rainfall and Rainfall Departure from Normal in Inches | | | | | | | | | | | | | | | |
|-------------------------------|------------------|---|--------|--------|--------|--|--------|--------|--------|---------------------------------------|--------|--------|--------|------------------------------------|--------|--------|--------|
| | | WY ¹ To Date (Since September 30, 2023) | | | | 11.5 Months (Since November 30, 2022) | | | | 2.5 Months (Since August 31, 2023) | | | | 5.5 Months (Since May 31, 2023) | | | |
| | | COUNTY | Normal | Actual | Depart | % | Normal | Actual | Depart | % | Normal | Actual | Depart | % | Normal | Actual | Depart |
| WESTERN REGION | ALLEGANY | 5.8 | 2.5 | -3.3 | 43% | 39.9 | 32.2 | -7.7 | 81% | 9.3 | 7.0 | -2.3 | 75% | 19.8 | 16.7 | -3.1 | 84% |
| | GARRETT | 6.4 | 4.8 | -1.6 | 75% | 46.0 | 40.1 | -5.9 | 87% | 10.1 | 8.6 | -1.5 | 85% | 23.3 | 21.4 | -1.9 | 92% |
| | WASHINGTON | 6.2 | 2.1 | -4.1 | 34% | 40.4 | 30.4 | -10.0 | 75% | 10.0 | 6.5 | -3.5 | 65% | 20.5 | 15.3 | -5.2 | 75% |
| | Regional Average | 6.1 | 3.1 | -3.0 | 51% | 42.1 | 34.2 | -7.9 | 81% | 9.8 | 7.4 | -2.4 | 75% | 21.2 | 17.8 | -3.4 | 84% |
| CENTRAL REGION | BALTIMORE COUNTY | 7.6 | 2.0 | -5.6 | 26% | 45.5 | 37.6 | -7.9 | 83% | 12.0 | 8.1 | -3.9 | 68% | 23.3 | 21.1 | -2.2 | 91% |
| | CARROLL | 7.1 | 1.7 | -5.4 | 24% | 43.8 | 31.6 | -12.2 | 72% | 11.4 | 6.3 | -5.1 | 55% | 22.5 | 14.9 | -7.6 | 66% |
| | CECIL | 7.1 | 1.8 | -5.3 | 25% | 44.8 | 40.3 | -4.5 | 90% | 11.5 | 7.6 | -3.9 | 66% | 23.4 | 23.1 | -0.3 | 99% |
| | FREDERICK | 6.8 | 1.9 | -4.9 | 28% | 42.6 | 31.7 | -10.9 | 74% | 10.9 | 6.6 | -4.3 | 61% | 21.6 | 15.0 | -6.6 | 69% |
| | HARFORD | 7.6 | 2.1 | -5.5 | 28% | 46.1 | 39.4 | -6.7 | 85% | 12.0 | 7.7 | -4.3 | 64% | 24.1 | 22.5 | -1.6 | 93% |
| | HOWARD | 7.3 | 1.7 | -5.6 | 23% | 44.5 | 34.9 | -9.6 | 78% | 11.4 | 7.3 | -4.1 | 64% | 22.6 | 18.2 | -4.4 | 81% |
| | MONTGOMERY | 6.9 | 1.5 | -5.4 | 22% | 42.9 | 34.9 | -8.0 | 81% | 11.0 | 7.6 | -3.4 | 69% | 22.1 | 18.7 | -3.4 | 85% |
| | Regional Average | 7.2 | 1.8 | -5.4 | 25% | 44.3 | 35.8 | -8.5 | 81% | 11.5 | 7.3 | -4.1 | 64% | 22.8 | 19.1 | -3.7 | 84% |
| SOUTHERN REGION | ANNE ARUNDEL | 6.9 | 2.0 | -4.9 | 29% | 42.3 | 37.7 | -4.6 | 89% | 10.8 | 7.8 | -3.0 | 72% | 21.9 | 21.7 | -0.2 | 99% |
| | CALVERT | 7.0 | 2.2 | -4.8 | 31% | 44.3 | 39.2 | -5.1 | 88% | 10.9 | 8.6 | -2.3 | 79% | 22.7 | 22.1 | -0.6 | 97% |
| | CHARLES | 6.9 | 1.5 | -5.4 | 22% | 42.8 | 35.4 | -7.4 | 83% | 10.8 | 6.3 | -4.5 | 58% | 22.3 | 18.8 | -3.5 | 84% |
| | PRINCE GEORGES | 7.1 | 1.6 | -5.5 | 23% | 42.3 | 36.0 | -6.3 | 85% | 10.9 | 7.2 | -3.7 | 66% | 22.1 | 20.9 | -1.2 | 95% |
| | ST MARYS | 7.0 | 2.1 | -4.9 | 30% | 44.0 | 36.8 | -7.2 | 84% | 10.9 | 7.1 | -3.8 | 65% | 22.7 | 19.1 | -3.6 | 84% |
| | Regional Average | 7.0 | 1.9 | -5.1 | 27% | 43.1 | 37.0 | -6.1 | 86% | 10.9 | 7.4 | -3.5 | 68% | 22.3 | 20.5 | -1.8 | 92% |
| EASTERN REGION | CAROLINE | 6.7 | 2.5 | -4.2 | 37% | 43.2 | 43.3 | 0.1 | 100% | 10.5 | 9.0 | -1.5 | 86% | 22.3 | 24.6 | 2.3 | 110% |
| | DORCHESTER | 52.9 | 48.3 | -4.6 | 91% | 43.6 | 40.0 | -3.6 | 92% | 10.3 | 7.2 | -3.1 | 70% | 22.6 | 21.8 | -0.8 | 96% |
| | KENT | 51.7 | 46.8 | -4.9 | 91% | 43.6 | 39.3 | -4.3 | 90% | 11.2 | 8.0 | -3.2 | 71% | 22.4 | 21.6 | -0.8 | 96% |
| | QUEEN ANNES | 52.2 | 47.7 | -4.5 | 91% | 43.1 | 39.7 | -3.4 | 92% | 10.8 | 8.1 | -2.7 | 75% | 22.2 | 21.4 | -0.8 | 96% |
| | SOMERSET | 50.6 | 46.3 | -4.3 | 92% | 43.0 | 38.4 | -4.6 | 89% | 10.2 | 7.1 | -3.1 | 70% | 22.4 | 18.9 | -3.5 | 84% |
| | TALBOT | 50.0 | 45.6 | -4.4 | 91% | 43.7 | 38.3 | -5.4 | 88% | 10.7 | 6.6 | -4.1 | 62% | 22.5 | 20.1 | -2.4 | 89% |
| | WICOMICO | 51.3 | 46.8 | -4.5 | 91% | 43.7 | 39.8 | -3.9 | 91% | 10.2 | 8.6 | -1.6 | 84% | 22.4 | 21.4 | -1.0 | 96% |
| | WORCESTER | 48.1 | 43.3 | -4.8 | 90% | 44.3 | 36.2 | -8.1 | 82% | 10.7 | 7.4 | -3.3 | 69% | 22.9 | 18.1 | -4.8 | 79% |
| Regional Average | 45.4 | 40.9 | -4.5 | 90% | 43.5 | 39.4 | -4.2 | 90% | 10.6 | 7.8 | -2.8 | 73% | 22.5 | 21.0 | -1.5 | 93% | |
| INDEPENDENT CITY OF BALTIMORE | | 7.6 | 2.0 | -5.6 | 26% | 45.2 | 37.2 | -8.0 | 82% | 12.0 | 8.1 | -3.9 | 68% | 23.3 | 21.1 | -2.2 | 91% |
| Statewide Average | | 19.8 | 15.0 | -4.8 | 76% | 43.6 | 37.1 | -6.5 | 85% | 10.9 | 7.5 | -3.3 | 69% | 22.4 | 19.9 | -2.5 | 89% |

WY¹ - USGS Water Year, which begins October 1

Stream Flow Status Based on Thirty Day Average for 2023 November 15

| Region | Stream Gage Location | Notes | Status Based on 30 Day Average | | |
|---------|--------------------------------------|-------|--------------------------------|------------|---------|
| | | | 30 Day Average (cfs) | Percentage | Status |
| Western | Youghiogheny (near Oakland) | | 156 | 55%-60% | Normal |
| Western | Savage River (near Barton) | | 13.3 | 60%-65% | Normal |
| Western | Wills Creek (near Cumberland) | | 38 | 35%-40% | Normal |
| Western | Marsh Run (at Grimes) | | 4.6 | 35%-40% | Normal |
| Central | Catoctin Creek (near Middletown) | | 4.5 | 10%-15% | Watch |
| Central | Monocacy (Jug Bridge near Frederick) | | 102 | 5%-10% | Warning |
| Central | Patuxent (near Unity) | | 9.1 | 20%-25% | Watch |
| Central | Deer Cr (at Rocks) | | 42.4 | 15%-20% | Watch |
| Eastern | Choptank (near Greensboro) | | 38.5 | 55%-60% | Normal |
| Eastern | Nassawango Creek (near Snow Hill) | | 9.0 | 45%-50% | Normal |
| | Susquehanna (at Marietta) | | 19,884 | 75%-80% | Normal |
| | Potomac (at Little Falls)(Adjusted) | | 1,738 | 5%-10% | Warning |

Notes:

| Ground Water Status for 15 November 2023 | | | | |
|---|-----------------------|---------------|-------------|---------|
| Region | USGS Well ID | Well Level[1] | Status | |
| Western | GA Bc 1 | 14.56 [03] | Normal | Warning |
| | AL Ah 1 | 4.54 [02] | Normal | |
| | WA Be 2 | 35.87 [02] | Warning | |
| | WA Bk 25 | 50.85 [03] | Emergency | |
| Central | BA Dc 444 | 43.17 [03] | Warning | Warning |
| | BA Ea 18 | 27.05 [02] | Emergency | |
| | HA Bd 31 | 12.5 [02] | Normal | |
| | HA Ca 23 | 7.98 [02] | Normal | |
| | MO Cc 14 | 38.33 [02] | Normal | |
| Eastern | QA Cg 69 | 3.89 [02] | Normal | Normal |
| | WI Cg 20 | 6 [02] | Normal | |
| | MC51-01 | 13.2 [03] | Normal | |
| | SO Cf 2 | 5.52[03] | Normal | |
| Southern | CH Bg 12 (unconfined) | 5.0 [03] | Normal | Normal |
| | AA Cc 40 (confined) | NA[2] | Unknown | |
| | CA Fd 54 (confined) | 241.68 | On Trend[4] | |
| | CH Dd 33 (confined) | NA[2] | Unknown | |
| | PG De 21 (confined) | NA[2] | Unknown | |
| | SM Fg 45 (confined) | NA[2] | Unknown | |
| [1] - Measurement of water level as feet below land surface [2] - Not Available as of 2023-11-21 [3] - Value computed from real time measurement [4] - In accordance with Maryland's drought monitoring and response plan, the impact of drought upon confined aquifers is analyzed as a departure from long term trend. | | | | |

Selected ground water levels are available from USGS at:

<http://md.water.usgs.gov/groundwater/>

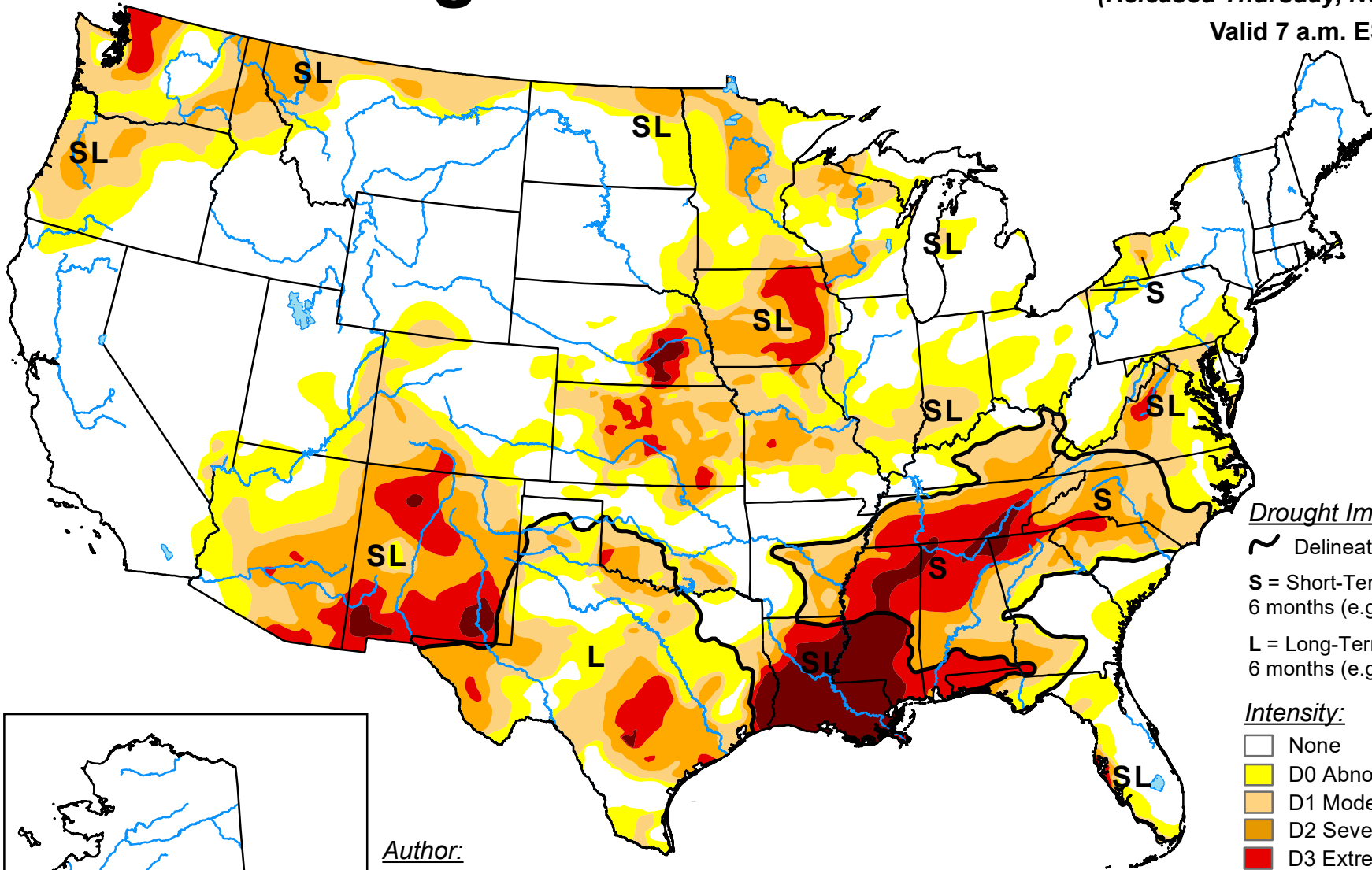
Data for other wells may be downloaded from:

[USGS - NWIS Web Information for USA](https://www.usgs.gov/nwis)

U.S. Drought Monitor

November 14, 2023
(Released Thursday, Nov. 16, 2023)

Valid 7 a.m. EST



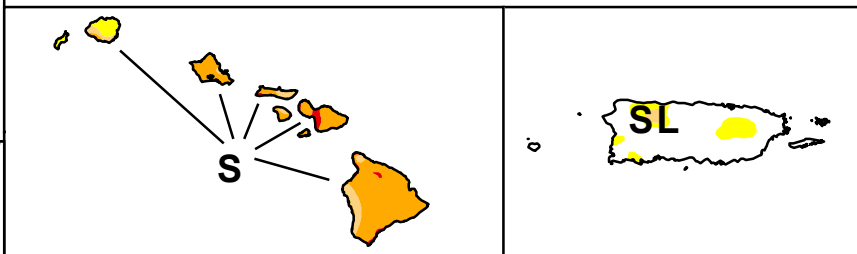
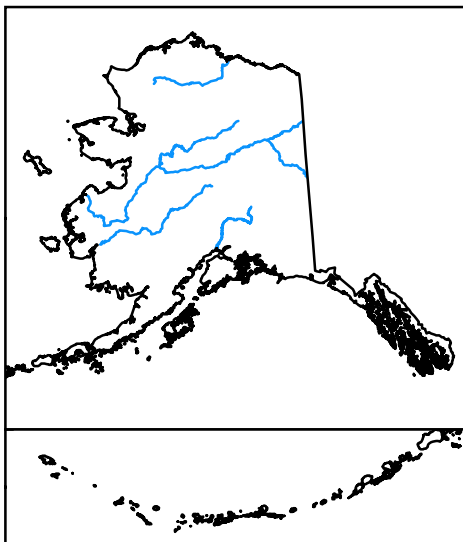
Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>



droughtmonitor.unl.edu

U.S. Drought Monitor

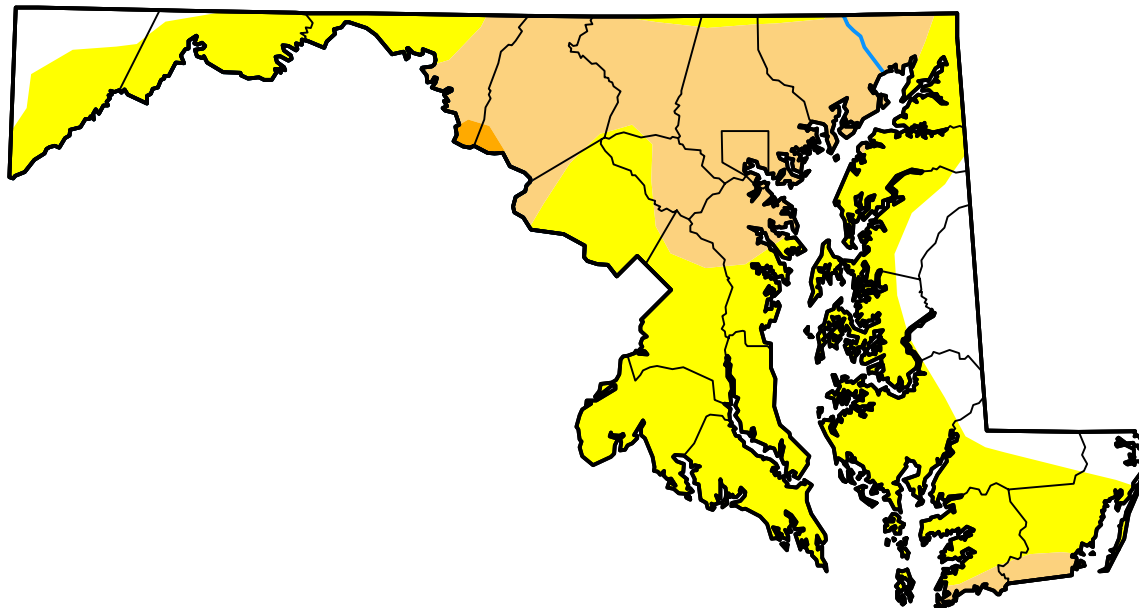
Maryland

November 14, 2023
(Released Thursday, Nov. 16, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|--------|-------|-------|-------|-------|------|
| Current | 12.57 | 87.43 | 33.19 | 0.47 | 0.00 | 0.00 |
| Last Week <i>11-07-2023</i> | 12.82 | 87.18 | 9.86 | 0.47 | 0.00 | 0.00 |
| 3 Months Ago <i>08-15-2023</i> | 73.81 | 26.19 | 15.68 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year <i>01-03-2023</i> | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Water Year <i>09-26-2023</i> | 63.11 | 36.89 | 3.30 | 0.47 | 0.00 | 0.00 |
| One Year Ago <i>11-15-2022</i> | 88.79 | 11.21 | 0.00 | 0.00 | 0.00 | 0.00 |



Intensity:



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